

The Claims

What is claimed is:

5 1. A turbomachine comprising at least one cavity between an inner casing and an outer casing of the turbomachine, said cavity comprising first means for discharging fluid from the cavity and second means for feeding fluid into the cavity, said first and second means being arranged proximate a highest geodetic level of the cavity, the cavity together with the first and the second means forming a flow path, and at least
10 one shutoff member being disposed in the flow path and permitting the flow path to be completely shut off.

 2. The turbomachine of claim 1, wherein the shutoff member is disposed in the means for discharging fluid.

15 3. The turbomachine of claim 1, wherein the shutoff member is a combined shutoff and throttle member that permits the flow path to be either shut off or throttled in a variable manner.

20 4. The turbomachine of claim 1, further comprising preheating means for preheating fluid fed to the cavity and being disposed upstream of where the fluid is fed into the cavity.

25 5. The turbomachine of claim 1, wherein the cavity has a form selected from the group consisting of a substantially annular-shaped cross-section and a ring-segment-shaped cross-section.

 6. The turbomachine of claim 1, wherein the turbomachine is a gas turbine.

7. The turbomachine of claim 6, wherein the inner casing is selected from the group consisting of a combustor plenum and a combustor wall of the gas turbine, and the outer casing is an outer shell of the gas turbine.

5 8. The turbomachine of claim 6, wherein the first means for discharging fluid are connected via a line to an exhaust-gas duct of the gas turbine.

9. The turbomachine of claim 6, wherein the second means for feeding fluid are connected to a cooling system of the gas turbine.

10 10. A method for operating a turbomachine comprising at least one cavity between an inner casing and an outer casing of the turbomachine, said cavity comprising first means for discharging fluid from the cavity and second means for feeding fluid into the cavity, said first and second means being arranged proximate a
15 highest geodetic level of the cavity, the cavity together with the first and the second means forming a flow path, and at least one shutoff member being disposed in the flow path and permitting the flow path to be completely shut off, the method comprising:
keeping the shutoff member closed during operation of the turbomachine;
and
20 opening the shutoff member when the turbomachine is at standstill.

11. The method of claim 10, wherein the shutoff member is alternately opened and closed when the turbomachine is at standstill.

25 12. The method of claim 11, wherein the shutoff member is opened and closed as a function of a thermal stratification measured in the cavity.

13. The method of claim 10, further comprising throttling the flow path
30 in a variable manner as a function of a temperature distribution measured inside the cavity.

14. The method of claim 10, wherein the shutoff member is opened during a cool-down phase of the turbomachine after operation thereof.